

Appendix D
Floodplain Evaluation of the Lagoon Area

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The Lagoon Area (OU2) Basis of Design Report and Contract Documents for Construction, submitted in January, 2006, proposed the construction of a soil cover over the Lagoon Area at the Continental Steel Superfund Site. The cover consisted of a minimum 2-foot thick soil cover with a 0.25% slope from a high point of 795 feet above mean sea level (AMSL) in the northeast corner to an elevation of 792 feet AMSL along Wildcat Creek. Wildcat Creek is the southern and western boundary for the Lagoon Area.

The drawings in the Contract Documents for Construction contained plan and cross-sectional views of the cover. Three cross-sections shown in Drawing C-8, G-G', H-H' and I-I', cross the southern berm of the Lagoon Area. These cross-sections show the southern berm is approximately 792 to 793 feet above mean sea level (AMSL). Drawings from the Contract Documents for Construction are included in Attachment 1.

At the request of the City of Kokomo and Howard County Plan Commission, the design was further reviewed with respect to the floodplain. To evaluate the floodplain, an additional survey of the southern berm was performed and Flood Insurance Rate Map (FIRM) for the area was obtained. The survey was performed in March 2006 and indicated the southern berm is higher than shown in the design drawings, ranging from 792.4 to 794 feet AMSL. Table 1 summarizes the March 2006 survey data.

The highest floodplain elevations shown in the FIRM along the southern edge of the Lagoon Area are between 792 and 793 feet AMSL. The FIRM is included in Attachment 2. To evaluate if there are any locations where the floodplain elevation is higher than the berm, the floodplain elevation was incorporated into the drawings in Attachment 1 for comparison with the existing and proposed grade.

The cross-sections illustrate that the existing berm is above the floodplain elevation. This condition is consistent along the boundary between Wildcat Creek and the Lagoon Area. In all locations, a berm with a height greater than the 100 year flood elevation separates the lagoons from Wildcat Creek. Given these previous modifications, which were not our doing, there is no unimpeded connection between the Lagoon Area and the adjoining floodplain area. Because there is no connection between the floodplain and the Lagoon Area, construction of the cover will not result in any loss of floodplain.

Table 1. Survey Coordinates for South Berm, March 2006

Station	Northing	Easting	Elevation
5000	8273.041	9228.901	793.542
5001	8270.593	9124.299	793.946
5002	8275.121	9021.095	793.961
5003	8285.494	8923.777	794.007
5004	8280.766	8814.409	793.055
5005	8277.365	8755.766	792.435
5006	8276.859	8645.924	793.278
5007	8237.658	8549.331	793.129
5008	8193.626	8451.656	793.738
5009	8205.222	8348.285	793.162
5010	8247.714	8261.535	793.638
5011	8296.442	8189.179	793.923